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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/684,736	10/14/2003	Robert J. Ramsey	RAMS/02	4294

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EXAMINER	
KOSOWSKI, ALEXANDER J	
ART UNIT	**PAPER NUMBER**
2125	

DATE MAILED: 02/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	**Application No.** 10/684,736	**Applicant(s)** RAMSEY, ROBERT J.	
	Examiner Alexander J Kosowski	**Art Unit** 2125	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _14 October 2003_.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-28_ is/are pending in the application.
  4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) _1-28_ is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☒ The drawing(s) filed on _14 October 2003_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.
  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
  Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  a)☐ All b)☐ Some * c)☐ None of:
    1.☐ Certified copies of the priority documents have been received.
    2.☐ Certified copies of the priority documents have been received in Application No. _____.
    3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
  * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1) Claims 1-28 are presented for examination.

Claim Rejections - 35 USC § 112

2) The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3) Claims 1, 5, and 10-11 are rejected under 35 U.S.C. 112.

Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The omitted steps are: the steps of making a plurality of bends. The pre-amble of claim 1 recites a "method for making a plurality of bends", however, the claimed method steps merely result in determining and outputting values. There is no actual bending that results.

Claim 5 recites the limitation "the actual angle" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 10 recites the limitation "the actual angle" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim.

Claim 11 recites the limitation "the actual angle" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 11 recites the limitation "the installer" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

4) The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5) Claims 1-3, 5, 6-9 and 12-15 are rejected under 35 U.S.C. 102(b) as being unpatentable by Kauffman et al (U.S. Pat 5,315,522).

Referring to claim 1, Kauffman teaches a method comprising: receiving a desired offset (col. 7 lines 43-50); receiving an actual degree (col. 6 lines 34-45); automatically determining a distance value using the desired offset and the actual degree, wherein the distance value comprises a desired relationship between first and second bend positions (col. 6 lines 17-30); and outputting the distance value (col. 7 lines 26-37).

Referring to claim 2, Kauffman teaches the method of claim 1, wherein automatically determining the distance value further includes determining the second bend position (col. 7 lines 53-63).

Referring to claim 3, Kaufmann teaches a method wherein automatically determining the distance value further includes using a reference position to determine the second bend position (col. 7 lines 43-63, whereby the operator may adjust settings to create a reference position).

Referring to claim 5, Kaufmann teaches a method wherein automatically determining the distance value further includes accessing a memory and correlating at least one of the actual angle and the offset to the distance value (col. 5 lines 3-31, whereby an offset calibration may be stored).

Referring to claim 6, Kaufmann teaches a method wherein automatically determining the distance value further includes determining a distance between respective centers of the first and second bend positions (col. 6 lines 17-30, whereby each “leg” between the bends is determined and is the distance between centers).

Referring to claim 7, Kaufmann teaches a method comprising bending the conduit using the distance value (col. 7 line 64 through col. 8 line 17).

Referring to claim 8, Kaufmann teaches that bending the conduit further includes repositioning the conduit while the conduit remains in the mechanical bending device (col. 7 lines 53-63, whereby the workpiece is moved after each bend).

Referring to claim 9, Kaufmann teaches a method wherein bending the conduit further includes making a bend at the second bend position including the actual angle (col. 7 line 64 through col. 8 line 17).

Referring to claim 12, Kaufmann teaches a method wherein receiving the actual degree further includes determining the actual degree (col. 4 lines 34-68).

Referring to claim 13, Kaufmann teaches a method wherein receiving the actual degree further includes automatically determining the actual degree (col. 4 lines 34-68).

Referring to claim 14, Kaufmann teaches a method wherein receiving the actual degree further includes determining the actual degree while using false zero mode (col. 7 lines 43-63, whereby the operator may adjust setting to create a reference position).

Referring to claim 15, Kaufmann teaches a method further comprising removably attaching the bend determining device to at least one of the mechanical bending device and the conduit (col. 4 lines 5-19).

6) Claims 26-28 are rejected under 35 U.S.C. 102(b) as being unpatentable over Eaton (U.S. Pat 4,080,814).

Referring to claim 26, Eaton teaches an apparatus, comprising: a mechanical bending device having a moveable bending component configured to bend conduit according to movement of the moveable bending component (col. 3 lines 25-45); and a position indicating device configured for attachment to the mechanical bending device, wherein the position indicating device initiates a signal in response to automatically detecting a preset position of at least one of the moveable bending component and the conduit (col. 5 lines 1-19 and col. 11 lines 54-60).

Referring to claim 27, Eaton teaches the apparatus of claim 26, wherein the position indicating device includes a switch (col. 8 lines 25-31).

Referring to claim 28, Eaton teaches the apparatus of claim 26, wherein the signal causes stoppage of the moveable bending component (col. 12 lines 9-35).

Claim Rejections - 35 USC § 103

7) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8) Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kaufmann, further in view of Levine (U.S. Pat 4,551,810).

Referring to claim 4. Kaufmann teaches the above. However, Kaufmann does not explicitly teach that automatically determining the distance value further includes using a trigonometric function.

Levine teaches a method of designing conduits whereby trigonometric formulas are utilized (col. 30 lines 44-51).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to utilize trigonometric functions in the method taught by Kaufmann since determining angle and distances is an involved geometrical problem which is commonly confronted and can be solved by trigonometric functions (Levine, col. 30 lines 44-51).

9) Claims 10-11 and 16-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaufmann, further in view of Eley (U.S. Pat 4,719,577).

Referring to claims 10-11, Kaufmann teaches the above. However, Kaufmann does not explicitly teach that bending the conduit further includes using a position indicating device to bend the conduit the actual angle, nor that bending the conduit further includes signaling the installer when the actual angle is achieved.

Eley teaches an apparatus for bending conduit whereby a signal is generated when a bent conduit reaches a preset position (col. 4 lines 5-11).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to initiate a signal in response to automatically detecting a preset position in the apparatus taught by Kaufmann since this would alert an operator that a desired rotation has been obtained (Eley, col. 4 lines 5-11).

Referring to claim 16, Kaufmann teaches an apparatus, comprising: a bend determining device for receiving a desired offset (col. 7 lines 43-50) and an actual angle (col. 6 lines 34-45), the bend determining device having a processor configured to execute program code for automatically determining a distance value indicative of where a second bend of an offset should be using the desired offset and the actual angle (col. 4 lines 39-46 and col. 6 lines 17-30, whereby); and a display in communication with the bend determining device for outputting the distance value to an installer (col. 7 lines 26-37). However, Kaufmann does not explicitly teach that conduit is being bent.

Eley teaches an apparatus for bending conduit to a desired angle that comprises an operator visual display (col. 1 line 52 through col. 2 line 39).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to bend conduit in the apparatus taught by Kaufmann since devices to bend conduit are well known and since it is often necessary to substantially duplicate bends successively in several conduits for installation in buildings in which electrical wire or cable are routed (Eley, col. 1 lines 10-16).

Referring to claim 17, Kaufmann teaches the above. However, Kaufmann does not explicitly teach a position indicating device configured to initiate a signal in response to automatically detecting a preset position of at least one of a mechanical bending device and the conduit.

Eley teaches an apparatus for bending conduit whereby a signal is generated when a bent conduit reaches a preset position (col. 4 lines 5-11).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to initiate a signal in response to automatically detecting a preset position in the apparatus taught by Kaufmann since this would alert an operator that a desired rotation has been obtained (Eley, col. 4 lines 5-11).

Referring to claim 18, Kaufmann teaches an apparatus comprising a mechanical bending device configured to bend the material (col. 4 lines 5-19 and col. 7 line 64 through col. 8 line 17).

Referring to claim 19, Kaufmann teaches an apparatus wherein the bend determining device automatically determines the actual angle (col. 4 lines 34-68).

Referring to claim 20, Kaufmann teaches an apparatus comprising an attachment mechanism for attaching the bend determining device to at least one of a bender and the conduit (col. 4 lines 5-19 and col. 7 line 64 through col. 8 line 17).

Referring to claim 21, Kaufmann teaches an apparatus wherein the bend determining device further includes at least one of a: protractor, measuring device, level holder, conversion table and a position indicating device carrier (col. 7 lines 53-63, whereby measurements can be taken).

Referring to claim 22, Kaufmann teaches an apparatus wherein the bend determining device determines the distance value while the conduit remains in the mechanical bending device (col. 6 lines 17-30).

Referring to claim 23, Kaufmann teaches an apparatus comprising a reference position on the conduit (col. 7 lines 43-63, whereby the operator may adjust settings to create a reference position).

Referring to claim 24, Kaufmann teaches an apparatus wherein the distance value equals a distance between respective centers of the first and second bend positions (col. 6 lines 17-30, whereby each "leg" between the bends is determined and is the distance between centers).

10) Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kaufmann, further in view of Eley, further in view of Chebbi (U.S. PGPUB 2003/0069662).

Referring to claim 25, Kaufmann teaches the above. Kaufmann also that the apparatus may operate in a false zero mode (col. 7 lines 43-63, whereby the operator may adjust settings to create a reference position). However, Kaufmann does not explicitly teach the use of a protractor.

Chebbi teaches a bending apparatus which utilizes a protractor for measurements (Paragraph 0152).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to utilize a protractor in the apparatus taught by Kaufmann above since this would allow an operator to measure an angle of a bend produced in order to check whether this angle corresponds to the programmed angle (Chebbi, Paragraph 0147).

Conclusion

11) The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Lewis (U.S. Pat 6,253,595) – teaches an automated pipe bending machine.

Ritter et al (U.S. Pat 4,161,110) – teaches an automatic bending machine.

12) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander J Kosowski whose telephone number is 571-272-3744. The examiner can normally be reached on Monday through Friday, alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Picard can be reached on 571-272-3749. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306. In addition, the examiner's RightFAX number is 571-273-3744.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Alexander J. Kosowski
Patent Examiner
Art Unit 2125

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